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To: [Eric Blischke/R10/USEPA/US@EPA](#); [Chip Humphrey/R10/USEPA/US@EPA](#)
Cc: [MCCLINCY Matt](#)
Subject: GW PA Outline
Date: 01/16/2009 12:18 PM

Eric & Chip,

I reviewed the LWG's 12/23/08 Draft Outline for the GW Pathway Assessment & Geochemical Analysis Appendix for the RI Report. Overall the outline looks good. I wanted to get you my comments ASAP. Matt's not in today, but he may send you a few additional comments Tues 1/20. If Matt sends you comments, I think 1 of his comments will be that there are a few additional sites in PH that have TZW or GW near the transition zone that the LWG should include in their analysis..., e.g., OSM & Siltronic.

1) TZW background- We understand the LWG will not try to establish background for metals in TZW using empirical data, but rather conduct a literature search to attempt to establish background. We don't have good background values for GW in the PH area. We see relatively elevated (& in some places significantly elevated) concentrations of metals in GW. However, several upland RPs have argued that these elevated concentrations observed in GW are significantly reduced as GW approaches discharge areas. This is likely due to redox or other geochemical/physical changes controlling metal solubility. For example, GW at the top of the bank at OSM shows highly elevated levels of Mn, but GW samples collected at beach wells (surrogates for TZW samples) show very significantly reduced Mn concentrations, which OSM argues is similar to what is seen in TZW at other PH sites & may be background. The LWG's proposed 3rd component of the GW PA appendix will help us understand geochemical conditions & controlling factors for metals in TZW, but it will be difficult to make both in-water cleanup & upland source control decisions without reasonable & valid background numbers.

2) TZW risk (Section 2)- While the LWG will assess "whether GW discharges to the Study Area are creating a complete chemical transport pathway via migration of chemicals in upland GW plumes to TZW, sediment, &/or surface water"..., the LWG does not describe how they will evaluate whether these complete contaminant migration pathways pose or contribute to unacceptable risk in the transition zone or in the river. We assume this risk evaluation will be part of the risk assessment.

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